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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/434,575	11/04/1999	DAVID A. G. DEACON	SPK-002	4114

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EXAMINER

JACKSON, CORNELIUS H

ART UNIT PAPER NUMBER

2828

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/434,575

**Applicant(s)**

DAVID A. G. DEACON

**Examiner**

Cornelius H. Jackson

**Art Unit**

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003 and 12 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 52-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 and 52-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 December 2003 has been entered.

### ***Acknowledgment***

2. Acknowledgment is made that applicant's Amendment, filed on 12 January 2004, has been entered. Upon entrance of the Amendment, claims 1, 2, 4, 5, 7, 10, 12, 15, 17, 18, 21, 23, 26, 29 and 52 were amended and claims 56 and 57 were added. Claims 1-35 and 52-57 are now pending in this case.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-35 and 52-55 have been considered but are moot in view of the new ground(s) of rejection.

***Specification***

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-35 and 51-57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 1-35 and 52-57 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are the steps used to form a resonant cavity. Independent claims 1 and 17 are directed to the claimed invention of a method of forming a resonant cavity (preamble), but the claim limitations fail to support the formation of a resonant cavity. Also the hybrid combination of a step of forming mixed with steps of operating makes the claims indefinite, since there is no

connection between the limitations as to how the operation steps help in forming the cavity.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-3, 17-19, 52-54, 56 and 57 are rejected under 35 U.S.C. 102(e) as being anticipated by Linke et al. (6363097). Linke et al. disclose a method comprising forming a portion of the intracavity waveguide, operating the laser device to produce an optical output; monitoring the optical output to determine the free spectral range of the laser device; and permanently modifying the effective refractive index of at least a portion of the intracavity waveguide segment, **see col. 3, line 15 through col. 5, line 7.**

In regard to claim 56, Linke et al. teach all the stated limitations, **see col. 3, line 15 through col. 5, line 7.**

In regard to claims 2-3, Linke et al. teach modifying the effective refractive index comprises illuminating the waveguide with an energy beam and all the other stated limitations, **see col. 3, lines 50-60.**

In regards to claim 17, it is inherent that the invention claimed in claim 1 employs the waveguide device claimed in claim 17. Therefore the rejection of claim 1 holds also on claim 17.

In regards to claim 52, Linke et al. teach all the stated limitations, see rejection to claim 1 above.

In regard to claim 57, see rejection to claims 17 and 56 above.

In regard to claims 18 and 53, see rejection to claims 2, 17 and 52 above.

In regard to claims 19 and 54, see rejection to claims 3, 17 and 52 above.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-16, 20-35 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linke et al. (6363097) in view of Brinkman (6167169). Linke et al., as applied to claims 1-3, 17-19 and 52-54 above, disclose all the stated limitations except for the type of material used for the waveguide segment. Brinkman et al. teach the waveguide segment comprises a polymer structure and crosslinking in the polymer material, **see col. 17, lines 20-38**. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the materials taught in Brinkman et al.

in the invention of Linke et al. in order to obtain a desired characteristic within the grating, **see col. 17, line 39-col. 18, line 61.**

In regard to claims 20 and 55, Linke et al. teach all the stated limitations, see rejection to claim 4 above.

In regard to claims 5-6 and 21-22, Brinkman et al. teach all the stated limitations, **see col. 60, line 61 through col. 61, line 12.**

In regard to claims 7-9, 12-15, 23-25 and 26-29, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

In regard to claims 10-11, Brinkman et al. teach all stated limitations, **see col. 33, lines 28-65.**

In regards to claim 16, Brinkman et al. teach all stated limitations, **see col. 6, lines 55- 65.**

In regard to claims 30-32, also see claim 3 above.

In regards to claim 33, Brinkman et al. teach phase matching, **see col. 24, line 55 through col. 25, line 14.**

In regards to claim 34, Brinkman et al. teach temperature control, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a heater element disposed adjacent to the index grating if so desired as an obvious design choice, **see claims 7-9 and 12-15 above.**

In regards to claim 35, also see claim 16 above.

**Conclusion**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (571)272-1942. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (571)272-1941. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CHJ

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